



Current Leakage Detection unit for AC/DC power systems - type: PDU4865

General description:

The CL Detection unit is a completely isolated current measuring system using a flux-gate principle. By measuring the difference between the in- and out-going current of a power supply, a leakage current can be detected. Therefore the power cords must be lead through the input gate of the unit. A leakage current is guarded by an amplifier/tripper that triggers a relay and a red LED indicates the alarm status. A green LED indicates that the power is on.

An alarming value is set with a potentiometer within a range from 10 ...100 %.

In case of an alarm or power fail, the relay is deactivated.

The relais can only be energized when the power is on and/or a reset is made. A reset can be made with the reset button on the unit, but there is also an external connection.

Specifications

Power consumption
Power input voltage
Reset input
Tamb

$I(\text{nom}) = 65 \text{ mA}$
 $U(\text{nom}) = 25\text{Vdc} (\pm 10\%)$
Momentarely to the 0 volt power
 $-10 \dots + 70 \text{ }^{\circ}\text{C}$

Monitored current range $I(\text{mn})$
Type range A
Type range B
Type range C

Depends on the transducer type
0...100mA
0...200mA
0...400mA

Setpoint alarm range (tripper)

10...100%

Alarm Relais
Contacts
Max. Ratings

Normaly Energized
Changeover (protected)
30Vdc / 4A

Alarm action
Reaction time

Relay de-energizes
 $\pm 200\text{msec.}$

Indications
Power on
Overrange (alarm)

Green LED
Red LED

Housing
Dimensions (mm.)
Material

DIN-rail enclosure
53.0x50.3x86.7 (WxHxD)
Polycarbonate (UL94-V0)

Isolation characteristics

Vb	Nominal Voltage	150 V(rms) with IEC 61010-1 standard	+ (1)
Vb	Nominal Voltage	250V (rms) with EN 50178 standard	+ (2)
Vd	Rms Voltage for AC isolation test, 50/60 Hz, 1mn	2.5 kV	
Ve	Rms Voltage for partial discharge extinction @ 10pC	>1.2 kV	
Vw	Impulse withstand voltage 1.2/50µs	6 kV	

If insulation cable is used for the primary circuit, the voltage category could be improved with the following table:

Cable insulation (primary)	Category
HAR 03	300V CAT III
HAR 05	400V CAT III
HAR 07	500V CAT III

1) Conditions

- ▶ Single insulation
- ▶ Over voltage category III
- ▶ Pollution degree 2
- ▶ Heterogeneous field

2) Conditions

- ▶ Reinforced insulation
- ▶ Over voltage category III
- ▶ Pollution degree 2
- ▶ Heterogeneous field